

OPERATION PLAN FOR SORTING TEAR-OFF ASPHALT SHINGLES FOR RECYCLING



Wilson County Landfill

Permit # 98-09

2416 Highway 42 East
Wilson, North Carolina 27893

Wilson County Solid Waste Management Department
Post Office Box 1728
Wilson, North Carolina 27893

Permit No.	Date	Document ID No.
98-01	December 17, 2012	17926

Received via an e-mail
Date: December 17, 2012
Solid Waste Section
Raleigh Central Office

Prepared by:



Bartlett Engineering and Surveying
1906 Nash Street North
Wilson, North Carolina 27893

November 20, 2012



I. Introduction

This operation plan describes how tear-off asphalt shingles will be collected, stored and managed at this facility in order to provide a material that can be used in asphalt production. Our facility uses best practices for acceptance to remove the tear-off shingles from the waste stream. The County has an agreement with S.T. Wooten Corporation for them to periodically haul the tear-off shingles to their facility where they will be responsible for any testing, sorting, grinding, processing and ultimately incorporating into their asphalt product.

II. Waste Acceptance

Asphalt roofing shingles contain asphalt cement, mineral aggregate and mineral filler which are raw materials used in asphalt production. Asbestos was used in shingle manufacture until the mid-1970's and in other roofing materials such as roof felt, roof putty, surface coating and mastic until the mid-1980s.

Our facility provides roofers with a list of acceptable and unacceptable items for tear-off shingle recycling and promotes source separation at the job site by the roofer. Materials from flat and built-up roofing systems are disposed of in the C & D Landfill rather than accepted for recycling due to the higher use of asbestos roofing materials in those systems. Roofers are encouraged to separate tear-off shingles into either a dedicated trailer or to layer their waste when loading so that the shingles can be easily separated from the unacceptable debris. Our list of acceptable and unacceptable material is shown in Attachment "A".

The shingle suppliers are also required to complete a supplier certification form. The handling and disposal of asbestos during demolition and renovation is regulated under the National Emissions Standards for Hazardous Air Pollution (NESHAP). NESHAP-regulated facilities are required to submit a notification of demolition and renovation prior to starting work. The notification includes an inspection by a North Carolina accredited asbestos inspector or roofing supervisor and analysis for asbestos. The supplier of shingles from a NESHAP-regulated facility must present documentation that the shingles do not contain greater than 1% asbestos. The documentation is a letter from the accredited asbestos inspector or roofing supervisor that sampled the shingles and the analytical test results. A copy of the documentation is kept with the supplier certification form. Shingles from a NESHAP-regulated facility that do not have the required documentation or that are documented to contain greater than 1% asbestos are disposed of in the C & D Landfill.

Shingles from single family homes or residential buildings containing four or fewer dwelling units are generally not regulated under NESHAP. Only the source of shingles is required for these shingles.

Our supplier certification form is shown in Attachment "B". These practices help ensure that only recyclable tear-off shingles are sent for asphalt production.

Asphalt shingle wastes generated outside Wilson County will not be accepted.

III. Flow and Management of Tear-off Shingles

Loads are visually inspected when entering the facility to determine whether the shingles have been separated or if it is a mixed load. The scale house attendant will record on the inspection form whether the load is source separated, layered or mixed. The roofer is asked to complete a supplier certification form. Mixed loads, shingles from a NESHAP-regulated facility that contain greater than 1 percent asbestos, and shingles from a NESHAP-regulated facility without the proper documentation are directed to the C & D Landfill for disposal. Loads that were source-separated into dedicated containers are sent directly to the Tear-Off Shingle Storage Area and unloaded. Loads that were separated into layers usually have the asphalt shingle on the bottom and other material on the top. These loads are first directed to the C & D Landfill to remove the non-shingle roofing waste and then to the Tear-Off Shingle Storage Area for unloading the shingles. Waste screening/inspection will be conducted at the tear-off shingle storage area in accordance with the approved Operations Plan (Doc ID 12737) for the C&DLF. Any unacceptable material must be taken out of the recyclable. At the conclusion of each day of operation, the rejected waste must be properly disposed of at the C&D Landfill, waste transfer station, recycle transfer station or other on-site waste management unit as applicable. Attachment "C" shows the location of the Tear-Off Shingle Storage Area. Shingles are not unloaded into an area with standing water. Tear-off shingles unloaded at the Tear-Off Shingle Storage Area will be grouped such that there is no more than 100 tons together. S.T. Wooten Corporation will haul the tear-off shingles to their facility when a sufficient amount is accumulated for them to process.

IV. Record Keeping

Records are kept of shingle waste entering the facility, sorted shingles leaving the facility for recycling, and waste that is disposed or sent for disposal. These records are kept for use in the facility's monthly and annual reports. Supplier certification forms and any supporting documents are also maintained.

S.T. Wooten Corporation contact information:

Recycle Program contact:
Page Keck 919-616-5073
12200 Cleveland Road
Garner, NC 27529

Shingles will be taken to:
James Ross 252-902-5706
ST Wooten Asphalt Plant
6148 Green Pond Road
Sims, NC 27880

V. Testing and Processing

S.T. Wooten Corporation will periodically haul the tear-off shingles to their facility. S.T. Wooten Corporation will be responsible for asbestos testing and any other required testing and record keeping for their sorting, grinding and additional processing.

Attachment "A"



Wilson County Landfill

TEAR-OFF ASPHALT SHINGLE RECYCLING

List of Acceptable and Unacceptable Materials

“YES”

Include these items:

- Shingles
- Felt attached to shingles

“NO”

Do NOT include these items:

- Wood
- Metal flashings, gutters, etc.
- Nails (best effort)
- Rolls or sheets of felt paper
- Plastic wrap, buckets
- Paper waste
- No garbage, trash, or other waste materials
- Built-up asphalt roofing
- Asbestos-containing materials
- Shingles containing mastics

Attachment “B”



Wilson County Landfill

SHINGLE SUPPLIER CERTIFICATION FORM

Supplier of Whole Tear-off Asphalt Shingles

Supplier Name: _____

Address: _____

Contact Name: _____

Phone: _____

We the undersigned certify that (check appropriate boxes):

- The tear-off shingles are from a NESHAP regulated facility and documentation stating that the shingles do not contain >1% asbestos is attached. (Documentation is a letter from the North Carolina accredited asbestos inspector or roofing supervisor that collected the samples with the analytical results attached.)

- The tear-off shingles are from a single family home or residential building having four or fewer dwelling units that is not regulated under NESHAP.

Tear-off shingles were removed from the following addresses:

(Please attach additional sheets as needed to record each building address.)

Shingle Supplier (signature)

Date

Attachment "C"

From: [Robert Bartlett](#)
To: [Chao, Ming-tai](#)
Cc: adavis@wilson-co.com; [Barnes, Ben](#)
Subject: RE: Wilson County Landfill - Tear-off Shingle Recycle
Date: Monday, December 17, 2012 11:19:50 AM
Attachments: [Wilson County tear-off shingle recylce.pdf](#)

The attached operation plan for tear-off shingle recycling at the Wilson County C&DLF has been revised as requested. If you need additional information, please let me know.

Robert S. Bartlett, PE
President
BARTLETT ENGINEERING & SURVEYING, PC

1906 Nash Street North
Wilson, NC 27893-1726
252.399.0704 Office
252.399.0804 Fax
252.205.1852 Cell
www.bartlett.us.com

Permit No.	Date	Document ID No.
98-01	December 17, 2012	17925

Issued via an e-mail
Date: **December 06, 2012**
Solid Waste Section
Raleigh Central Office

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intentionally becoming better at providing
engineering and surveying solutions . . .
serving others . . . serving Jesus Christ!*

From: Chao, Ming-tai [mailto:ming.chao@ncdenr.gov]
Sent: Thursday, December 06, 2012 1:22 PM
To: Robert Bartlett
Cc: Andy Davis <adavis@wilson-co.com> (adavis@wilson-co.com); Barnes, Ben
Subject: RE: Wilson County Landfill - Tear-off Shingle Recycle

Dear Mr. Bartlett:

After reviewing the permit modification application – operation plan for the tear-off asphalt shingle recycling facility inside the Wilson County C&DLF, the Solid Waste Section has few comments on the application stated below:

1. (Section II) The received asphalt shingle wastes must be generated inside the Wilson County which is the Permit Condition NO. 9 and consistent with the resolution passed by the Wilson County Commissioners on November 4, 2002. Please add this requirement to the section.
2. (Section III) Please address the following concerns:
 - For the wastes separated into layers, prior to disposing wastes to the landfill cell, the waste screening/ inspection on the incoming load must be conducted according to the approved Operations Plan (Doc ID 12737) for the C&DLF. The waste screening form must be used and placed in the operating record.

- For the source separated loads, please describe wastes screening requirements to remove any unacceptable material out of the loads which is unloaded at the "Tear-Off Shingle Storage Area." Visual inspection by a scale house attendant is not the complete waste screening processes. The above-referenced waste screening processes for C&D wastes is applicable for this waste unit. If you accept my suggestion please add the reference to this section. The unacceptable material must be taken out of the recyclable and may be temporarily stockpiled at the "Tear-Off Shingle Storage Area." At the conclusion of each day of operation the rejected wastes must be either disposed of at the designated area (C&D landfill or the nearby transfer station) if they are acceptable solid wastes or moved to other on-site waste management unit (if they are recyclable). Please revise this section accordingly.

3. (Section IV) Please provide the contact info of S.T. Wooten Corporation including the facility physical address, phone number, point of contact, and e-mail addresses. Please contact me if you have any question or request for clarification on the above-referenced comments.

Best regards,

Ming-Tai Chao, P.E.
Environmental Engineer
Permitting Branch, Solid Waste Section
Division of Waste Management
(Mailing Address)

**1646 Mail Service Center
Raleigh, NC 27699-1646**

(Street Address)
Green Square, 217 West Jones Street
Raleigh, NC 27603
Tel. 919-707-8251
ming.chao@ncdenr.gov
<http://portal.ncdenr.org/web/wm/sw>

E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Robert Bartlett [mailto:robertb@Bartletteng.com]
Sent: Tuesday, December 04, 2012 8:34 AM
To: Chao, Ming-tai
Cc: Andy Davis
Subject: Wilson County Landfill - Tear-off Shingle Recycle

Mr. Chao:

Please find attached, the operational plan for the tear-off shingle recycle storage that Wilson County Landfill is implementing. I plan to send you a hard copy unless you tell me you don't need one. If there are any questions or comments, or if you have any suggestions for revising the operational plan please let me know.

Robert S. Bartlett, PE
President
BARTLETT ENGINEERING & SURVEYING, PC

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